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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
WILSON, KAITLIN A				
ART UNIT		PAPER NUMBER		
3636				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

**Application No.**

10/526,432

**Applicant(s)**

YASUDA ET AL.

**Examiner**

KAITLIN A. WILSON

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12/21/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/02)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The Amendments and Applicant Arguments submitted on 09/27/2007 have been received and its contents have been carefully considered.

Claims 1-25 are presented for examination.

#### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. JP 2002-258306, filed on 12/21/2007.

#### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 5, 6, 11-18, and 19-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The limitations of "vicinities beneath ischial tuberosities of a seated person" and "upward than beneath the shoulder blades and a connection position further downward than the lumbar vertebrae region" specifically limits the claim to particular part of the human body. A claim directed to or including within its scope a human being or attributes of a human being is not patentable subject matter. See MPEP §2105 and 1077 OG 24 (April 21, 1987).

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Regarding Claims 2 and 3, the claim language states "a tension which two-dimensionally supports the planar tension structure". How is an object supported two-dimensionally by a tension? What is meant by this language? Both claims 2 and 3 also state "a pseudo normal line direction", the use of the word pseudo is unclear as to how it limits the claim. Claim 3 further states that the pseudo normal line direction is along a vertical plane that includes a front rear direction. How does a vertical line contain the horizontal front-rear direction? For the purpose of examination the examiner presumes that the applicant means that the planar tension structure is supported in three directions, one of which intersects the other two in a vertical direction which results in three vectors of tension.
5. Regarding Claim 4, the claim language states "at a time of sitting, pulls a rear end of the planar tension structure rearward while moving the rear end forward". This does not go with the accepted understanding of the invention. How does the elastic member move the structure rearward and forward at the same time? It is in fact the action of sitting that pulls the structure forward and not the elastic structure.
6. Regarding Claims 5, 7, 11, 12, 17, 18, and 19 the limitations "vicinities beneath ischial tuberosities of a seated person", "upward than beneath the shoulder blades and a connection position further downward than the lumbar vertebrae region" and "corresponding to a pelvis of a seated person" limits the claim to particular parts of the

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human body. Since people come in different shapes, sizes, abilities and characteristics, the scope of the claim is unclear. See §101 rejections above.

7. Regarding Claims 10, the limitations "structure so as to make integral a three-dimensional tension structure and a two-dimensional tension structure". It is unclear what is meant by the phrase "make integral". How are the two structures made integral? How does this relate to the substantially central portion?

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. **As best understood, Claims 1-6, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujita et al. (US Patent 6,302,487 B1).**

2. In re Claim 1, with reference to Figures 9,16 and 17 Fujita et al. discloses a seat (S) comprising:

- a seat frame including a sitting portion frame (16) and a back portion frame (20)
- a planar tension structure (8) attached to the sitting portion frame (16) or the back portion frame (20); and
- an elastic supporting structure (52,54) that supports the planar tension structure (8) between the sitting portion frame (16) or the back portion frame (20) and the planar tension structure (8), such that directions of tensions acting on the planar tension structure (8) extend in three directions.

9. The examiner notes that the Y and Z components of the spring (52) and the X component of the spring (54) produce a tension in three directions.
10. In re Claim 2, as best understood, Fujita et al. disclose that the tension is formed of a tension, which two-dimensionally supports the planar tension structure, and a pseudo normal line direction force, which is a force in a direction intersecting the tension (col. 8, lines 19-29).
11. In re Claim 3, as best understood, with reference to Figure 1, Fujita et al. disclose a direction of the pseudo normal line direction force is a direction along a vertical plane including a front--rear direction of the seat.
12. In re Claim 4, as best understood, with reference to Figures 11 and 16, Fujita et al. disclose that a front end of the planar tension structure is fixed to the sitting portion frame (16), and wherein the elastic supporting structure includes a first elastic member (52) which, at the time of sitting pulls a rear end of the planar tension structure rearward.
13. In re Claim 5, as best understood, with reference to Figures 11 and 16, Fujita et al. disclose wherein the elastic supporting structure includes a second elastic member which is provided between the sitting portion frame and the planar tension structure, and which, at a time of sitting, pulls downward.
14. In re Claim 6, as best understood, with reference to Figures 16 and 17, Fujita et al. disclose inherently disclose that the second elastic member (13) pulls the planar tension structure such that maximum flexing at the time of sitting arises rearward of a front-rear direction central portion at the time of sitting.

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15. In re Claim 17, with reference to Figures 9, 16 and 17 Fujita et al. ('487) discloses a seat comprising:

- a frame for a sitting portion (16)
- a cushion material including a lower layer portion (15) stretched in a front-rear direction at the frame for the sitting portion (16), and a surface layer portion layered on the lower layer portion and stretched at the frame for the sitting portion (10) (col. 13, lines 13-18); and
- a tension adjusting mechanism (52, 54) connecting connection positions at the lower layer portion (15) in vicinities of beneath ischial tuberosities of a seated person and portions at the frame for the sitting portion (16) which portions are lower than the connection positions, and generating tensile force at a time of sitting.

Fig. 9

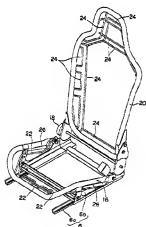


Fig. 16

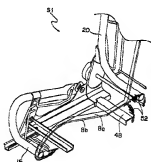
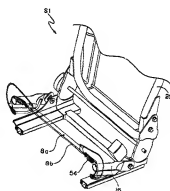


Fig. 17



16. As best understood, Claims 1-6 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujita et al. (US Patent 6,302,487 B1).

17. In re Claim 18, with reference to Figure 1, Arnold et al. disclose a seat comprising:

- back portion frame (2)
- a cushion material (50) including a lower layer portion (20) stretched on the back portion frame and a surface layer portions (52) layered on the lower layer portion and stretched on the back portion frame; and
- a tension adjusting mechanism (34) that connected at least one connection position of the lower layer portion (20) that is located further upward than beneath the shoulder blades.

***Claim Rejections - 35 USC § 103***

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**19. Claim 22 as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. (US Patent 6,302,487 B1).**

20. In re Claim 22, Fujita et al ('487) discloses the seat as described above, with three-dimensional and two-dimensional net fabrics, but fails to disclose that they stretch in one direction and not the other.



21. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a net that stretches in one direction since it was known in the art that net fabrics stretch more in one direction than the other.

**22. As best understood, Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. (US Patent 6,302,487 B1) in view of Karg (US 2,633,184).**

23. In re Claim 7, Fujita et al. disclose the seat as described above with two tension members, but fail to disclose a third tension member along the outer regions of the rear end of the seat.

24. However, with reference to Figure 1, Karg discloses a spring attached to the rear outer edge of the seat.

25. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the seat of Fujita et al. with a third spring as taught by Karg at the outer portions of the seat, in order it increase the comfort of the seat upon seating.

**26. Claims 8, and 12-16 as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. (US Patent 6,302,487 B1) in view of Granger (199,535).**

27. In re Claim 8, as best understood, with reference to Figures 9,16 and 17, Fujita et al. disclose that the elastic supporting structure is provided between the sitting portion

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frame (16) and the planar tension structure (8), and at a time of sitting urges downward (52) a portion of the planar tension structure (8) that is located further rearward with respect to a front-rear directions than a central portion of the planar tension structure.

28. Fujita et al fails to disclose a part that urges upward a portion of the planar tension structure.

29. However, with reference to Figures 2 and 3, Granger discloses a spring support system that includes springs (b) arranged under a plate (a) on the seating region of a chair that is located further forward than the center of the chair.

30. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the spring structure as taught by Granger, since Granger states that the structure prevents strain of the limbs.

31. In re Claim 12, as best understood, with reference to Figures 9,16 and 17, Fujita et al. disclose a seat (S) comprising:

- a seat frame having a sitting portion frame (16) and back portion frame (20);
- a cushion material including a two-dimensional knit fabric or a three-dimensional solid knit fabric (8) stretched at the sitting portion frame (16) or back portion frame(20); and

32. Fujita et al. ('487) fail to disclose a tension adjusting mechanism that adjusts tension such that force in a pushing direction occurs at a region of the cushion material that a specific region of a human body pushes at a time of sitting.

33. However, with reference to Figures 2 and 3, Granger discloses a spring support system that includes springs (b) arranged under a plate (a) on the seating region of a chair.

34. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the spring structure as taught by Granger, since Granger states that the structure prevents strain of the limbs.

35. In re Claim 13, as best understood, with reference to Figure 17, Fujita et al. disclose a connection member (54) which connects the seat frame and a portion of the cushion material corresponding to the region that the specific region of the human body pushes, and which functions as an elastic member which generates tensile force at the time of sitting.

36. In re Claim 14, as best understood, Granger discloses an urging member (b) that is provided which urges, in a direction opposite to the pushing direction by the human body at the time of sitting, a region at the cushion material which region is other than a region which is pulled by the connecting member.

37. In re Claim 15, as best understood, Granger discloses that the urging member includes a compression spring (b) which is disposed beneath the cushion material at the sitting portion frame.

38. In re Claim 16, as best understood, Fujita et al. disclose that the urging member includes an extension spring (54) which connects the sitting portion frame (16) or the back portion frame and the cushion material (8).

**39. Claims 9 and 10, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. (US Patent 6,302,487 B1) in view of Nakane et al. (US 2001/0043002 A1).**

40. In re Claims 9 and 10, Fujita et al. disclose the seating structure as described above, but fail to disclose an elastic supporting structure for the back portion frame.

41. However, with reference to Figure 2, Nakane et al. discloses two sets of spring structures, a first set of torsion springs (82) that can move the support structure forward and a second set of hanger springs (75) that pull in a rearward directions.

42. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the planar tension structure of Fujita et al. with the torsion and hanger springs of Nakane et al., in order to better allow for flexibility of the back support frame.

**43. Claim 11 is rejected, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. (US Patent 6,302,487 B1) in view of Nakane et al. (US 2001/0043002 A1) and further in view of Granger (199,535).**

44. In re Claim 11, Fujita et al. disclose the seating structure as described above, but fail to disclose a supporting plate disposed beneath the pelvis of a seated person.

45. However, with reference to Figures 2 and 3, Granger discloses a spring support system that includes springs (b) arranged under a plate (a) on the seating region of a chair that is located further forward than the center of the chair.

46. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the spring and plate structure as taught by Granger, since Granger states that the structure prevents strain of the limbs.

**47. Claims 19-22, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. (US Patent 6,302,487 B1) in view of Granger (199,535) and Akizuki et al. (US 5,490,718).**

48. In r Claim 19, as best understood, Fujita et al. disclose a seat frame (16) that includes a fixed frame (16) with a cushion material that includes a cloth spring material (8) with a front end portion that is anchored at the fixed frame (16) and a surface layer portion layered on the cloth spring material and stretched on the fixed frame (2); and a tension adjusting mechanism (52) wherein the tension adjusting mechanism generates tensile force at the time of sitting.

49. Fujita et al. fail to disclose an urging member and a movable frame.

50. However, with reference to Figure 11, Akizuki et al. discloses a rear-linking frame member (68) that pivots around the stepped bolt (78) upon sitting.

51. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the elastic supporting structure and fabric of Fujita et al. with the rear rotatable member as taught by Akizuki et al, in order to allow for better comfort upon sitting.

52. However, with reference to Figures 2 and 3, Granger discloses a spring support system that includes springs (b) arranged under a plate (a) on the seating region of a chair that is located further forward than the center of the chair.

53. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the spring structure as taught by Granger, since Granger states that the structure prevents strain of the limbs.

54. In re Claim 20, with reference to Figures 2 and 3, Granger discloses a pushing member (a).

55. In re Claim 21, with reference to Figures 2 and 3, Granger disclose the pushing plate as described above, but fails to disclose the exact dimensions of the pushing plate.

56. It would have been obvious matter of design choice to modify the Granger et la. reference by having the pushing plates of a width of 100mm that includes a rear end portion that is positioned 250 mm to 350mm forward, since applicant has not discloses that having exact dimensions and position solves any stated problem or brings about unexpected results.

***Allowable Subject Matter***

57. Claims 23-25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph and 35 U.S.C. 101, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

58. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

59. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAITLIN A. WILSON whose telephone number is (571)270-3206. The examiner can normally be reached on Monday - Friday (7:00am-4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Dunn can be reached on (571)272-6670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/K. A. W./  
Examiner, Art Unit 3636

/David Dunn/  
Supervisory Patent Examiner, Art Unit 3636